

REMARKS

Claim Rejections – 35 U.S.C. §112 Rejections

Claims 29, 30, 36, and 37 were rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claims the subject matter which applicant regards as the invention, and under 35 U.S.C. §112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the Application was filed, had possession of the claimed invention which rejections are traversed.

Applicants are NOT in agreement with the Examiner's assertion that the 90 nm layer thickness is an endpoint for the thickness range of the anode, buffer, and hole transport layers.

Adequate support for the thickness ranges of claims 29, 30, 36, and 37 is found in the written disclosure beginning on line 22, page 17 and continuing throughout the embodiments and Examples. "90nm" is not an endpoint as suggested by the Examiner in paper number 7, paragraph 10. The written description provides support, for example, for a range of values not limited to but including from about 10nm to 500nm, 20nm to 500 nm, 30nm to 500nm, 40nm to 500nm, etc on up to from about 499nm to 500nm.

Further, with regard to the rejection contained in paper #5, paragraph #6, and with regard to claims 29, 30, 36, and 37, the buffer layer is an optional layer; ~~the tertiary aromatic amine may appear in the hole transport layer alone, or in combination with an optional buffer layer.~~ The buffer layer functions to improve the adhesion between the anode and the organic hole transporting layer, thus further improving the device operation stability. "If the scope of subject matter embraced by a claim is clear, and if

the Applicant has not otherwise indicated that he intends that claim to be of a different scope, then the claim does particularly point out and distinctly claim the subject matter which the Applicant regards as his invention." *In re Borkowski*, 422 F.2d 904, 164 U.S.P.Q. 642 (C.C.P.A. 1970). Therefore, claims 29, 30, 36, and 37, which are understandable to one skilled in the art and which define subject matter that the Applicant regards as the invention, meets the requirement of 35 U.S.C. §112, second paragraph.

Claims 1-9, 27, 28, 31-35, and 39-41 were rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claims the subject matter which applicant regards as the invention which rejection is traversed.

Claims 1, 19, 31, and 35 have been amended and which amendments, do not, in Applicants view, relate to patentability or the scope of the claims.

Claim Rejections – 35 U.S.C. §103 Rejections

Claims 1-19, 25-37, and 39-43 are rejected under 35 U.S.C. §103 (a) as being unpatentable over Fink (US 6,352,791, the US equivalent of PCT/DE97/01269 to Robert Boach GmbH) in view of Tang et al. (US 6,048,573) which rejection is traversed.

With regard to claims 1-19, 25-37, and 39-43, the Examiner has failed to establish a *prima facie* case of obviousness as it relates to the combination of references.

The Examiner has not pointed out in either reference a suggestion as to why it would be desirable to combine the two disclosures in the manner proposed by the Examiner.

The motivation to modify the prior art must flow from some teaching in the art that suggests the desirability or incentive to make the modification of the combination of references needed to arrive at the claimed

invention. No motivation is found in either reference for combining the light emitting layer of Fink et al. with the fluorescent dye of Tang et al. Also, neither Tang et al. nor Fink et al. provide motivation for including a monovalent aromatic group or a multivalent aromatic group which contains at least two conjugate-linked or at least two fused aromatic rings with a stilbene derivative, or a cathode comprised of a low work function metal. Neither reference provides any suggestion as to why it would be desirable to combine the two disclosures.

"Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching, suggestion or incentive supporting the combination."; accord *In re Geiger*, 815 F.2d 686, 688, 2 U.S.P.Q.2d 1276, 1278 (Fed. Cir. 1987); *In re Laskowski*, 871 F.2d 115, 117, 10 U.S.P.Q.2d 1397, 1399 (Fed. Cir. 1989) ("the mere fact that the prior art could be so modified would not have made the modification obvious unless the prior art suggested the desirability of the modification") (quoting *In re Gordon*, 733 F.2d 900, 902, 221 U.S.P.Q. 1125, 1127 (Fed. Cir. 1984)).

It seems the Examiner is using the Applicant's disclosure as a blueprint to reconstruct the claimed invention from isolated pieces of the prior art. "Care must be taken to avoid hindsight reconstruction by using 'the patent in suit as a guide through the maze of prior art references, combining the right references in the right way so as to achieve the result of the claims in suit.'" *Grain Processing Corp. v. American Maize-Prods. Co.*, 840 F.2d 902, 907, 5 U.S.P.Q.2d 1788, 1792 (Fed. Cir. 1988).

With regard to claim 1, the Examiner has not pointed out in Fink et al. a light emitting layer containing a fluorescent dye selected from the group consisting of coumarins, quinacridones, and aromatic hydrocarbon fluorescent dyes and wherein said fluorescent dye is present in an amount of

from about 10^{-3} to about 10 mole percent based on the moles of said light emitting layer material. The Examiner has pointed to Tang et al., column 2, lines 1-4 to argue that Tang "teaches a desired dopant concentration range is 10^{-3} to 10 mole percent". The Examiner failed to indicate that Tang et al. teaches, column 1, 59 through column 2, lines 1-9, that the indicated concentration range is cited to point out a "difficulty" with the prior art. Tang et al. indicates that "[w]hen a fluorescent dopant is to be uniformly incorporated within an organic light-emitting layer, the light-emitting host material and the fluorescent dopant material are co-deposited from two independently controlled deposition sources. It has been found to be difficult to reliably control the deposition rate of a fluorescent dopant when a desired dopant concentration in the host material of the organic light-emitting layer is at or near a lower end of a dopant concentration range of 10^{-3} to about 10 mole percent. The difficulty of reliably controlling the deposition rates of an organic light-emitting host material and of a fluorescent dopant material has been an obstacle in the process of reproducibly fabricating organic electroluminescent devices containing a fluorescent dopant or fluorescent dopants", column 1, line 63 through column 2, line 9. Tang et al. discloses this information to cite that in this particular concentration range, wherein said fluorescent dye is present in an amount of from about 10^{-3} to about 10 mole percent based on the moles of said light emitting layer material, that this has been an "obstacle" in fabricating electroluminescent devices containing fluorescent dopants. Tang et al. teaches away from Applicants' claimed concentration range because of the obstacles and the Examiner has not pointed out in Tang et al. a single light emitting layer containing a fluorescent dye selected from the group consisting of coumarins, quinacridones, and aromatic hydrocarbon fluorescent dyes and wherein said fluorescent dye is present in an amount of

from about 10^{-3} to about 10 mole percent based on the moles of said light emitting layer material.

With regard to claims 7 and 16, the Examiner has failed to point out in the reference to Fink et al. where there is disclosed an electroluminescent device in accordance with **claim 4** wherein L is —C(R'R'')— , wherein R' and R'' is a hydrogen atom, an alkyl group containing from 1 to about 10 carbon atoms, or an alkoxy group containing from 1 to about 10 carbon atoms.

With regard to claims 18 and 19, the buffer layer is not optional in claims 18 and 19. Claim 18 specifically comprises a buffer layer comprised of a phthalocyanine or derivatives thereof, a tertiary aromatic amine, a polyaniline, or a polythiophene. Claim 19 comprises the tertiary aromatic amine N,N',N,N'-tetraarylbenzidine, doped with an aromatic polycyclic hydrocarbon stabilizer of rubrene or a 9,10-diphenylanthracene, wherein said stabilizer is present in an amount of from about 0.5 to about 10 weight percent, based on the weight of said tertiary aromatic amine, and said stabilizer. The Examiner has not pointed out why the Examiner believes the buffer of claims 18 and 19 is optional.

With regard to claim 29, the Examiner has failed to show any suggestion within the references for combining the thickness requirement of Tang et al. with the Fink et al. cathode, other than the knowledge learned from the Applicant's disclosure.

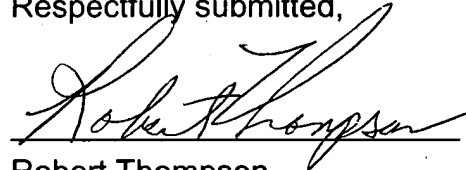
The application and claims are believed to be in a condition for allowance in their present form and which allowance is respectfully requested.

In the event the Examiner considers personal contact advantageous to the disposition of this case, he is hereby authorized to call Robert Thompson, at Telephone Number 585-423-2050, Rochester, New York.

Application No. 09/489,144

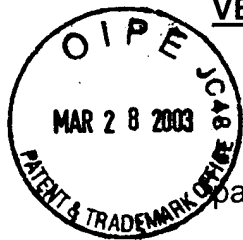
No additional fee is believed to be required for this amendment. However, the undersigned Xerox Corporation attorney hereby authorizes the charging of any necessary fees, other than the issue fee, to Xerox Corporation Deposit Account No. 24-0025. This also constitutes a request for any needed extension of time and authorization to charge all fees therefor to Xerox Corporation Deposit Account No. 24-0025.

Respectfully submitted,

A handwritten signature in cursive script, appearing to read "Robert Thompson", is written over a horizontal line.

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(585) 423-2050

R-T/pn
December 10, 2001
Xerox Corporation
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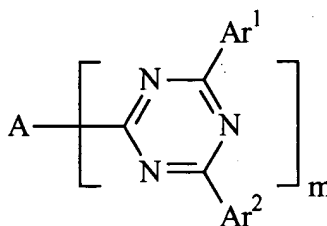


VERSION WITH MARKINGS TO SHOW CHANGES MADE:

IN THE SPECIFICATION:

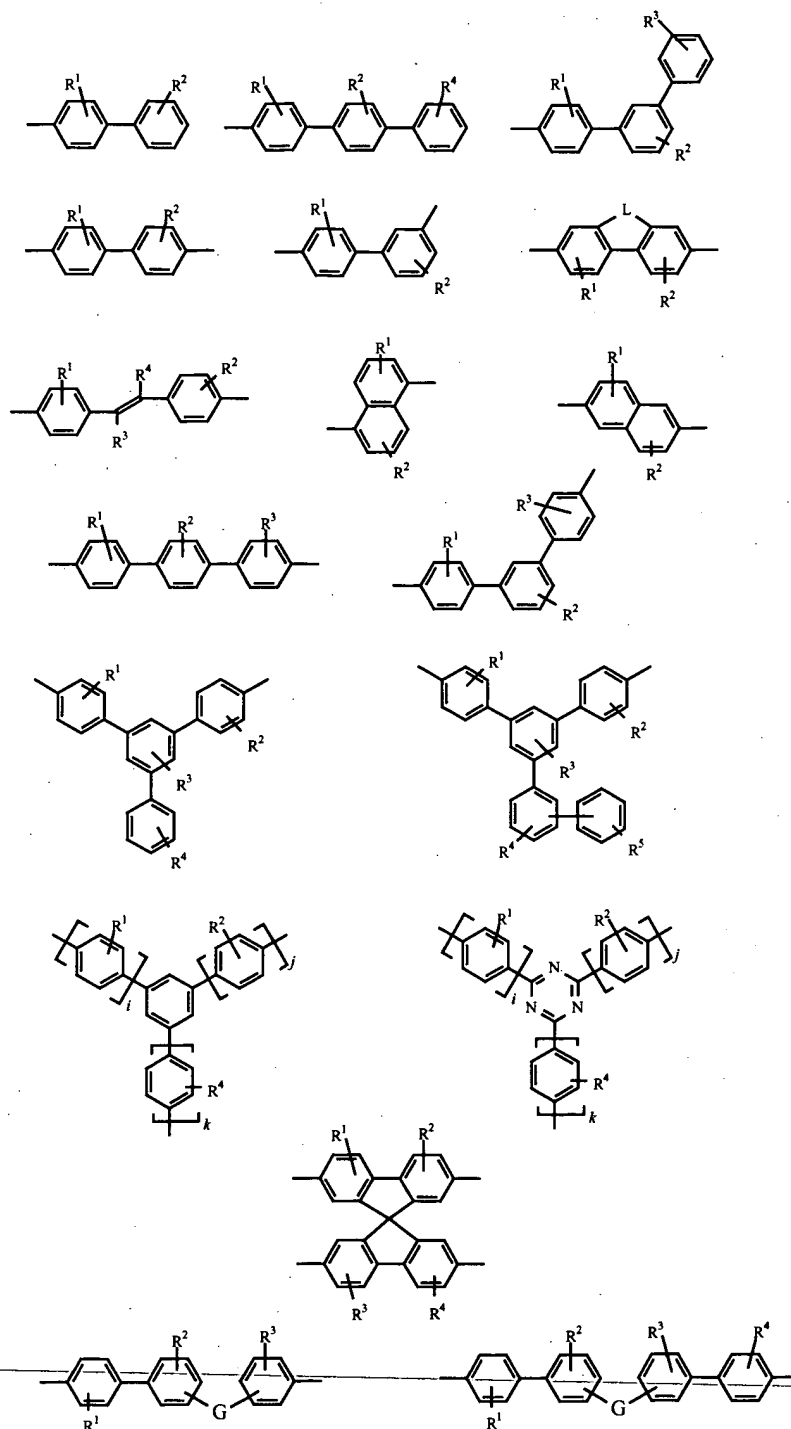
Amended paragraph beginning on page 6, line 27, ending on page 21, line 23:

Aspects of the present invention relate to an electroluminescent device comprised of an anode and a cathode, and situated therebetween the anode and the cathode at least one electron transport layer comprised of a triazine of the formula



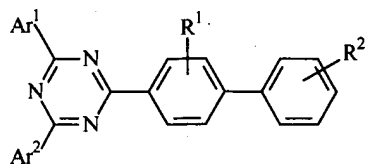
(I)

wherein A is a monovalent or a multivalent aromatic group which contains at least two conjugate-linked or at least two fused aromatic rings; Ar¹ and Ar² are each independently aryl or aliphatic; and m represents the number of repeating segments; an electroluminescent device wherein the A aromatic group is selected from the group consisting of

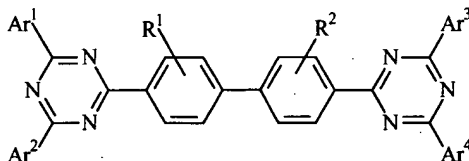


wherein R^1 to R^5 are each independently a substituent selected from the group consisting of hydrogen, aliphatic, a halogen atom, and a cyano group; L is a divalent group selected from the group consisting of $—C(R'R'')—$, alkylene, an

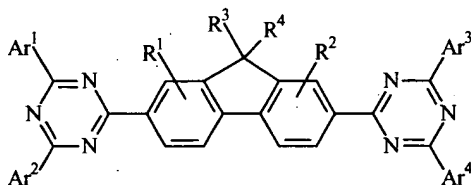
oxygen atom, a sulfur atom; and —Si(R'R'')— wherein R' and R'' are selected from the group consisting of hydrogen, alkyl, alkoxy, and aryl; G is a divalent linkage and each i, j, and k represent the number of repeating groups; an electroluminescent device wherein A contains a biphenyl, a naphthyl or a terphenyl; Ar^1 and Ar^2 are each independently an aryl group selected from the group consisting of a phenyl, a biphenyl, a naphthyl, and a stilbenyl; and wherein the aryl group optionally further contains a substituent selected from the group consisting of hydrogen, an alkyl group with from 1 to about 6 carbon atoms, an alkoxy group with from 1 to about 6 carbon atoms, a halogen, and a cyano group; an electroluminescent device wherein the triazine compounds are represented by the Formula (II), (III), (IV), or (V)



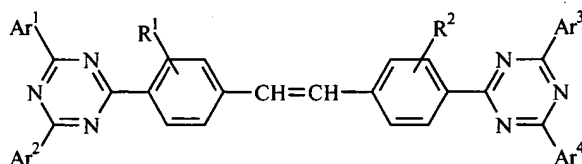
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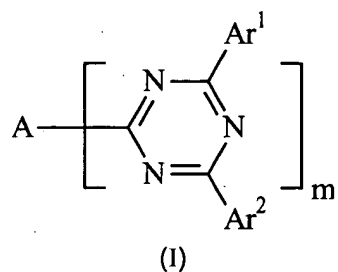


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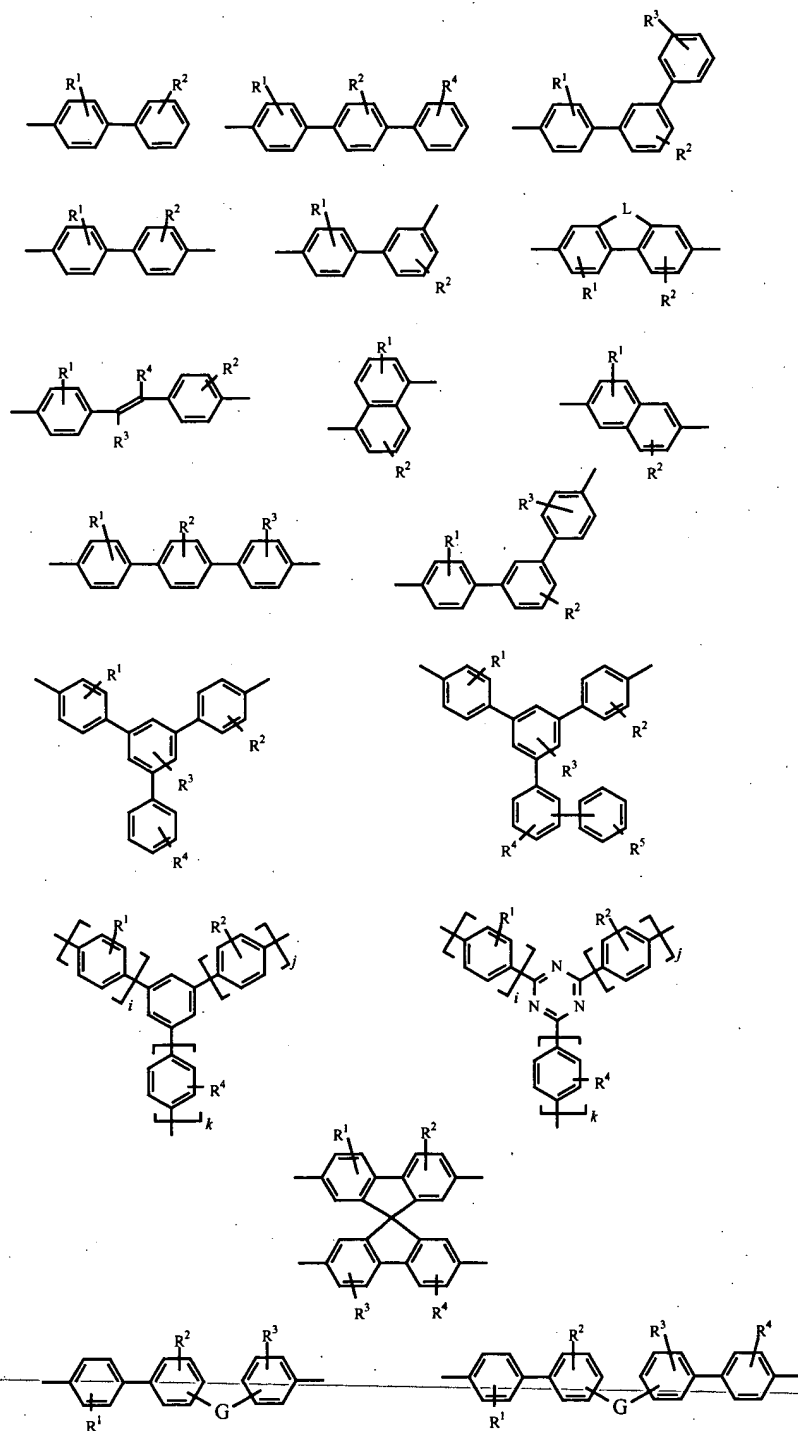
wherein Ar¹, Ar², Ar³, and Ar⁴ are each independently an aryl; R¹ and R² are substituents selected from the group consisting of hydrogen, an alkyl, an aryl, an alkoxy, a halogen atom, and a cyano; R³ and R⁴ are each a divalent group L selected from the group consisting of —C(R'R'')—, alkylene, an oxygen atom, a sulfur atom, and —Si(R'R'')—, wherein R' and R'' are selected, for example, from the group consisting of hydrogen, alkyl, alkoxy, and aryl; an electroluminescent device wherein Ar¹, Ar², Ar³, and Ar⁴ are aryl with about 6 to about 36 carbon atoms, and more specifically, are selected from the group consisting of a phenyl, a biphenyl, a naphthyl, and a stilbenyl; and wherein the aryl group contains a substituent selected from the group consisting of

hydrogen, an alkyl group with from 1 to about 12 carbon atoms, an alkoxy group with from 1 to about 6 carbon atoms, a halogen atom, and a cyano group; an electroluminescent device wherein the aryl is selected from the group consisting of a phenyl, a tolyl, a methoxyphenyl, a butylphenyl, a naphthyl, and a biphenyl; and wherein R¹ and R² are hydrogen or methyl; an electroluminescent device wherein L is —C(R'R'')—, wherein R' and R'' is a hydrogen atom, an alkyl group containing from 1 to about 10 carbon atoms, or an alkoxy group containing from 1 to about 10 carbon atoms; an electroluminescent device wherein the triazine is selected from the group consisting of 2,4,6-tris(4-biphenyl)-1,3,5-triazine, 2,4,6-tris[4-(4'-methylbiphenyl)]-1,3,5-triazine, 2,4,6-tris[4-(4'-tert-butylbiphenyl)]-1,3,5-triazine, 2,4,6-tris[4-(4'-methoxybiphenyl)]-1,3,5-triazine, 4,4'-bis-[2-(4,6-diphenyl-1,3,5-triazinyl)]-1,1'-biphenyl, 4,4'-bis-[2-(4,6-di-p-tolyl-1,3,5-triazinyl)]-1,1'-biphenyl, 4,4'-bis-[2-(4,6-di-m-tolyl-1,3,5-triazinyl)]-1,1'-biphenyl, 4,4'-bis-[2-(4,6-di-p-methoxyphenyl-1,3,5-triazinyl)]-1,1'-biphenyl, 4,4'-bis-[2-(4,6-di-m-methoxyphenyl-1,3,5-triazinyl)]-1,1'-biphenyl, 4,4'-bis-[2-(4-β-naphthyl-6-phenyl-1,3,5-triazinyl)]-1,1'-biphenyl, 2,7-bis-[2-(4,6-di-phenyl-1,3,5-triazinyl)]fluorene, 2,7-bis-[2-(4,6-di-phenyl-1,3,5-triazinyl)]-9,9-dimethylfluorene, 4,4'-bis-[2-(4,6-di-phenyl-1,3,5-triazinyl)]-stilbene, and 4,4'-bis-[2-(4-phenyl-6-m-tolyl-1,3,5-triazinyl)]-stilbene; an electroluminescent device wherein the triazine is selected from the group consisting of 2,4,6-tris(4-biphenyl)-1,3,5-triazine, 4,4'-bis-[2-(4,6-diphenyl-1,3,5-triazinyl)]-1,1'-biphenyl, 4,4'-bis-[2-(4,6-di-p-tolyl-1,3,5-triazinyl)]-1,1'-biphenyl, 4,4'-bis-[2-(4,6-di-m-tolyl-1,3,5-triazinyl)]-1,1'-biphenyl, 4,4'-bis-[2-(4,6-di-p-methoxyphenyl-1,3,5-triazinyl)]-1,1'-biphenyl, 4,4'-bis-[2-(4,6-di-p-tert-butylphenyl-1,3,5-triazinyl)]-1,1'-biphenyl, and 4,4'-bis-[2-(4,6-di-phenyl-1,3,5-triazinyl)]-stilbene; an electroluminescent device comprised of, in sequence, an anode, an optional buffer layer, a hole transport layer, an electron transport

layer, and in contact therewith a cathode, wherein the electron transport layer contains an electron transport component comprised of a triazine compound or compounds encompassed by the formula

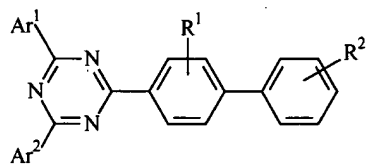


wherein A is an aromatic group which contains at least two conjugate-linked or two fused aromatic rings; Ar¹ and Ar² are each independently aryl or aliphatic; and m represents the number of repeating segments; an electroluminescent device wherein the A group is selected from the group consisting of

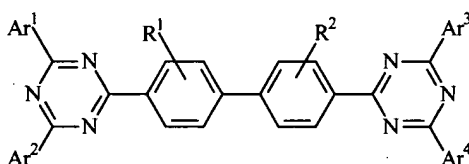


wherein R^1 to R^5 are each independently a substituent selected from the group consisting of hydrogen, aliphatic, a halogen atom, and a cyano group; L is a divalent group selected from the group consisting of $-C(R'R'')-$, alkylene, an

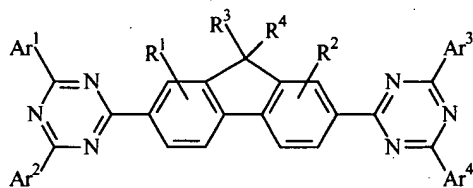
oxygen atom, a sulfur atom; and —Si(R'R'')— wherein R' and R'' are selected from the group consisting of hydrogen, alkyl, alkoxy, and aryl; G is a divalent linkage and each i, j, and k represent the number of repeating groups; an electroluminescent device which contains a biphenyl, a naphthyl or a terphenyl; Ar¹ and Ar² are each independently an aryl group selected from the group consisting of a phenyl, a biphenyl, a naphthyl, and a stilbenyl; wherein the aryl group optionally further contains a substituent selected from the group consisting of hydrogen, an alkyl group, an alkoxy group, a halogen, and a cyano group; an electroluminescent device wherein there is selected a triazine compound represented by the Formula (II), (III), (IV), or (V)



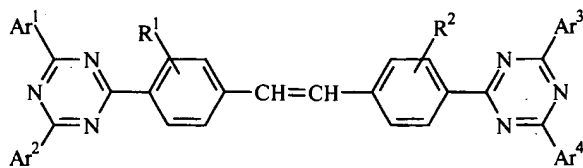
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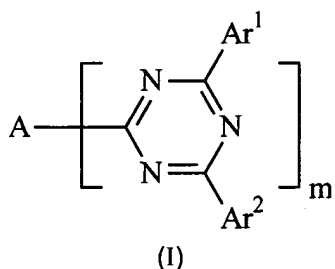


(V)

wherein Ar^1 , Ar^2 , Ar^3 , and Ar^4 are each independently alkyl or preferably aryl; R^1 and R^2 are substituents selected from the group consisting of hydrogen, an alkyl, an aryl, an alkoxy, a halogen atom, and cyano; L is a divalent group selected from the group consisting of $-C(R'R'')-$, alkylene, an oxygen atom, a sulfur atom, and $-Si(R'R'')-$, wherein R' and R'' are each selected from the group consisting of hydrogen, alkyl, alkoxy, and aryl; an electroluminescent device wherein Ar^1 , Ar^2 , Ar^3 , and Ar^4 are selected from the group consisting of phenyl, biphenyl, naphthyl, and stilbenyl; wherein the aryl group further contains a substituent selected from the group consisting of hydrogen, an alkyl group with from 1 to about 10 carbon atoms, an alkoxy group with from 1 to about 10 carbon atoms, a halogen atom, and a cyano group; an electroluminescent device wherein the aryl is selected from the group consisting of a phenyl, a tolyl, an methoxyphenyl, a butylphenyl, a naphthyl, and a biphenyl; wherein R^1 and R^2 are hydrogen or methyl; an electroluminescent device wherein L is $-C(R'R'')-$, wherein R' and R'' is a hydrogen atom, an alkyl group containing from 1 to about 6 carbon atoms, or an alkoxyl group containing from 1 to about 6 carbon atoms; an electroluminescent device wherein the hole transport layer or the electron transport layer is a light emitting layer; an electroluminescent device wherein the buffer layer is comprised of a phthalocyanine or derivatives thereof, a tertiary aromatic amine, a polyaniline, or a polythiophene; an electroluminescent device wherein the buffer layer is comprised of the tertiary aromatic amine N,N',N,N'-tetraarylbenzidine, optionally doped with an aromatic polycyclic hydrocarbon stabilizer of rubrene or a 9,10-diphenylanthracene, wherein the stabilizer is present in an amount of from about 0.5 to about 10 weight percent, based on the weight of the tertiary aromatic amine, and the stabilizer; an electroluminescent device further containing a light emitting layer situated between the hole transport layer and

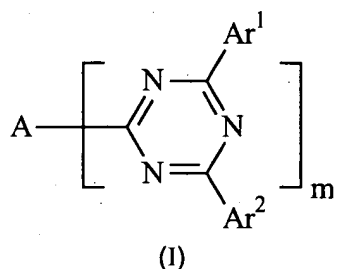
the electron transport layer; an electroluminescent device wherein the light emitting layer is comprised of a metal chelate compound of an 8-hydroxyquinoline, or a stilbene derivative; an electroluminescent device wherein the light emitting layer further contains a fluorescent dye; an electroluminescent device wherein the fluorescent dye is selected from the group consisting of coumarins, quinacridones, and aromatic hydrocarbon fluorescent dyes; an electroluminescent device wherein the fluorescent dye is present in an amount of from about 10^{-3} to about 10 mole percent based on the moles of the light emitting layer material; an electroluminescent component wherein there is selected a triazine compound selected from the group consisting of 2,4,6-tris(4-biphenyl)-1,3,5-triazine, 2,4,6-tris[4-(4'-methylbiphenyl)]-1,3,5-triazine, 2,4,6-tris[4-(4'-tert-butylbiphenyl)]-1,3,5-triazine, 2,4,6-tris[4-(4'-methoxybiphenyl)]-1,3,5-triazine, 4,4'-bis-[2-(4,6-diphenyl-1,3,5-triazinyl)]-1,1'-biphenyl, 4,4'-bis-[2-(4,6-di-p-tolyl-1,3,5-triazinyl)]-1,1'-biphenyl, 4,4'-bis-[2-(4,6-di-m-tolyl-1,3,5-triazinyl)]-1,1'-biphenyl, 4,4'-bis-[2-(4,6-di-p-methoxyphenyl-1,3,5-triazinyl)]-1,1'-biphenyl, 4,4'-bis-[2-(4,6-di-m-methoxyphenyl-1,3,5-triazinyl)]-1,1'-biphenyl, 4,4'-bis-[2-(4- β -naphthyl-6-phenyl-1,3,5-triazinyl)]-1,1'-biphenyl, 2,7-bis-[2-(4,6-di-phenyl-1,3,5-triazinyl)]fluorene, 2,7-bis-[2-(4,6-di-phenyl-1,3,5-triazinyl)]-9,9-dimethylfluorene, 4,4'-bis-[2-(4,6-di-phenyl-1,3,5-triazinyl)]-stilbene, and 4,4'-bis-[2-(4-phenyl-6-m-tolyl-1,3,5-triazinyl)]-stilbene; an electroluminescent compound wherein there is selected a triazine compound selected from the group consisting of 2,4,6-tris(4-biphenyl)-1,3,5-triazine, 4,4'-bis-[2-(4,6-diphenyl-1,3,5-triazinyl)]-1,1'-biphenyl, 4,4'-bis-[2-(4,6-di-p-tolyl-1,3,5-triazinyl)]-1,1'-biphenyl, 4,4'-bis-[2-(4,6-di-m-tolyl-1,3,5-triazinyl)]-1,1'-biphenyl, 4,4'-bis-[2-(4,6-di-p-methoxyphenyl-1,3,5-triazinyl)]-1,1'-biphenyl, 4,4'-bis-[2-(4,6-di-p-tert-butylphenyl-1,3,5-triazinyl)]-1,1'-biphenyl, and 4,4'-bis-[2-(4,6-di-phenyl-1,3,5-triazinyl)]-stilbene; an electroluminescent device wherein the anode is

comprised of an indium tin oxide, and the cathode is comprised of a low work function metal; an electroluminescent device wherein the low work function metal is lithium, magnesium, aluminum, or each of the alloys thereof; an organic electroluminescent device comprising in the following sequence an anode comprised of indium tin oxide in a thickness of from about 1 to about 500 nanometers, including 90 nanometers, an optional buffer layer comprised of a phthalocyanine or a stabilized tertiary aromatic amine and which buffer layer is of a thickness of from about 5 to about 300 nanometers, including 90 nanometers, a hole transport layer comprised of a tertiary aromatic amine and which layer is of a thickness of about 1 to about 200 nanometers, including 90 nanometers, a triazine electron transport layer of a thickness of from about 5 to about 300 nanometers, including 90 nanometers, and a cathode comprised of a low work function metal and which cathode is of a thickness of from about 10 to about 800 nanometers and wherein the triazine is of the formula



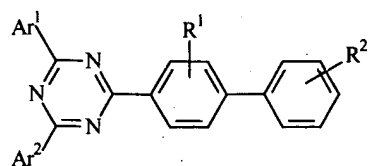
wherein A is aromatic which contains at least two conjugate-linked or two fused aromatic rings; Ar¹ and Ar² are each independently aryl or aliphatic; and m represents the number of repeating segments; an organic electroluminescent device wherein the anode is of a thickness of from about 30 to about 100 nanometers, the buffer layer is present and is comprised of a phthalocyanine or a stabilized tertiary aromatic amine and which layer is of a thickness of from about 10 to about 200 nanometers, a light emitting layer in contact with the hole transport layer and comprised of an 8-hydroxyquinoline metal chelate or a stilbene derivative and which layer is of a thickness of from

about 1 to about 500 nanometers; an organic electroluminescent device comprised of an anode, an organic luminescent medium, and a cathode, wherein the organic luminescent medium contains a triazine layer in contact with the cathode, which layer is comprised of the triazine compounds of Formula (I), and wherein the triazine functions as an electron transport, an electron injector, or simultaneously as an electron transport and an electron injector

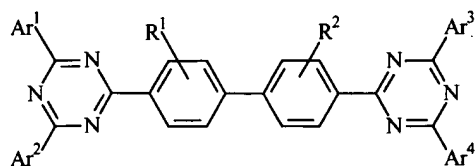


(I)

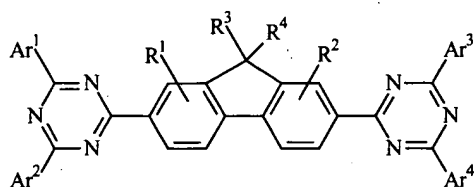
wherein A is a monovalent or a multivalent aromatic group which contains at least two conjugate-linked or at least two fused aromatic rings; Ar¹ and Ar² are each independently aryl or aliphatic; and m represents the number of repeating segments; an organic electroluminescent device wherein the cathode is comprised of lithium, magnesium, aluminum, or their alloys; an organic electroluminescent device wherein the cathode is comprised of aluminum; an organic electroluminescent device wherein there is selected a triazine represented by the Formula (II), (III), (IV), or (V)



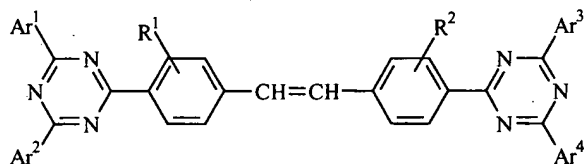
(II)



(III)

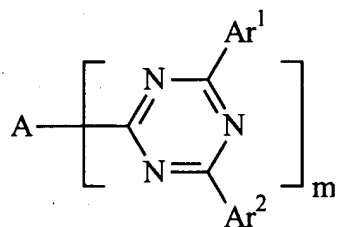


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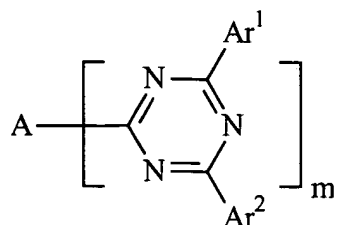
wherein the substituents are as illustrated herein; an electroluminescent device comprised of an anode, a cathode, and a triazine compound of the formula



(I)

wherein A is a monovalent aromatic group or a multivalent aromatic group which contains from about 2 to about 15 two conjugate-linked or from about 2 to about 15 fused aromatic rings; Ar¹ and Ar² are each independently aryl or

aliphatic; and m represents the number of repeating segments and is a number of from 1 to about 4, and wherein the triazine functions as an electron transport, an electron injector, or simultaneously as an electron transport and an electron injector; an organic electroluminescent device wherein the anode is of a thickness of from about 30 to about 100 nanometers, the buffer layer is of a thickness of from about 10 to about 100 nanometers, the hole transport is of a thickness of from about 5 to about 100 nanometers, the triazine electron transport layer is of a thickness of from about 10 to about 100 nanometers, and the cathode is of a thickness of from about 50 to about 500 nanometers, and wherein the low is from about 2 to about 4 electron volts, and wherein Ar^1 and Ar^2 are each independently aryl; an organic electroluminescent device wherein the anode is of a thickness of from about 30 to about 100 nanometers, the buffer layer is of a thickness of from about 10 to about 100 nanometers, the hole transport layer is comprised of a tertiary aromatic amine in a thickness of about 5 to about 100 nanometers, thereover a light emitting layer comprised of an 8-hydroxyquinoline metal chelate or a stilbene derivative of a thickness of from about 10 to about 100 nanometers, the triazine electron transport layer is of a thickness of about 10 to about 100 nanometers, and the cathode is of a thickness of from about 50 to about 500 nanometers; an electroluminescent device wherein the triazines R^1 to R^5 are each alkyl, alkoxy, or mixtures thereof; alkyl for the R' and R'' contains from 1 to about 25 carbon atoms; and each of the i , j and k represent a number of from 1 to about 3; an electroluminescent device wherein at least one is from 1 to about 10; an electroluminescent device wherein the at least one is from 1 to about 3; an electroluminescent device wherein the at least two is from 2 to about 7, and electron transport electron injection, or mixtures thereof, components comprised of the triazine compounds illustrated by the formula

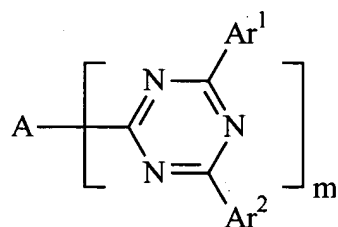


(I)

wherein Ar¹ and Ar² are independently aromatic, such as an aryl group, and which aryl can, for example, be selected from the group consisting of a phenyl, a stilbenyl, a biphenyl, a naphthyl, a pyridyl, and a quinolyl and the like, and wherein the aryl group may further contain a substituent selected from the group consisting of hydrogen, an alkyl group with, for example, from 1 to about 10 carbon atoms, an alkoxy group with, for example, from 1 to about 10 carbon atoms, a dialkylamino group with preferably from about 1 to about 3 carbon atoms, a halogen, a cyano group and the like; m is a number of from 1 to about 4; and A is a monovalent or a multivalent aromatic group which contains at least two conjugate-linked or two fused aromatic rings, such as from about 2 to about 10.

IN THE CLAIMS:

1. (Twice Amended) An electroluminescent device comprised of an anode and a cathode, and situated therebetween said anode and said cathode at least one electron transport layer comprised of a triazine of the formula

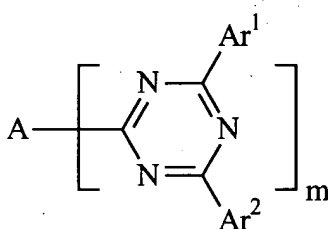


(I)

wherein A is a monovalent or a multivalent aromatic group which contains at least two conjugate-linked or at least two fused aromatic rings; Ar¹ and Ar² are each independently aryl or aliphatic; and m represents the number of repeating segments and further containing a light emitting layer situated between [the]a hole transport layer and the electron transport layer wherein the light emitting layer contains a fluorescent dye selected from the group consisting of coumarins, quinacridones, and aromatic hydrocarbon fluorescent dyes and wherein said fluorescent dye is present in an amount of from about 10⁻³ to about 10 mole percent based on the moles of said light emitting layer material.

19. (Amended) An electroluminescent device in accordance with **claim 10** wherein said buffer layer is comprised of the tertiary aromatic amine N,N',N,N'-tetraarylbenzidine, [optionally]doped with an aromatic polycyclic hydrocarbon stabilizer of rubrene or a 9,10-diphenylanthracene, wherein said stabilizer is present in an amount of from about 0.5 to about 10 weight percent, based on the weight of said tertiary aromatic amine, and said stabilizer.

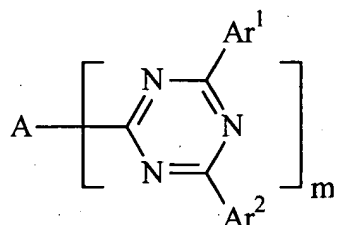
31. (Twice Amended) An organic electroluminescent device comprised of an anode, an organic luminescent medium, and a cathode, wherein the organic luminescent medium contains a triazine layer in contact with the cathode, which layer is comprised of the triazine compounds of Formula (I), and wherein said triazine functions as an electron transport, an electron injector, or simultaneously as an electron transport and an electron injector



(I)

wherein A is a monovalent or a multivalent aromatic group which contains at least two conjugate-linked or at least two fused aromatic rings; Ar¹ and Ar² are each independently aryl or aliphatic; and m represents the number of repeating segments and further containing a light emitting layer situated between [the]a hole transport layer and [the]an electron transport layer wherein the light emitting layer contains a fluorescent dye selected from the group consisting of coumarins, quinacridones, and aromatic hydrocarbon fluorescent dyes and wherein said fluorescent dye is present in an amount of from about 10⁻³ to about 10 mole percent based on the moles of said light emitting layer material.

35. (Twice Amended) An electroluminescent device comprised of an anode, a cathode, and a triazine compound of the formula



(I)

wherein A is a monovalent aromatic group or a multivalent aromatic group which contains from about 2 to about 15 two conjugate-linked or from about 2 to about 15 fused aromatic rings; Ar¹ and Ar² are each independently aryl or aliphatic; and m represents the number of repeating segments and is a number of from 1 to about 4, and wherein said triazine functions as an electron transport, an electron injector, or simultaneously as an electron transport and an electron injector and further containing a light emitting layer situated between [the]a hole transport layer and [the]an electron transport layer wherein the light emitting layer contains a fluorescent dye selected from the group consisting of coumarins, quinacridones, and aromatic hydrocarbon fluorescent dyes and wherein said fluorescent dye is present in an amount of from about 10⁻³ to about 10 mole percent based on the moles of said light emitting layer material.